

WHAT IS CLAIMED IS:**1. A fuel cell comprising:**

a stacked cell unit including a plurality of stacked cells having separators; wherein
5 the stacked cell unit has a stacked cell unit side surface that is surface smoothed.

2. The fuel cell according to claim 1, further comprising:

an internal manifold that is formed so as to pass through the separators, and wherein
the stacked cell unit side surface faces the internal manifold.

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3. The fuel cell according to claim 1, wherein

the stacked cell unit side surface is formed in a taper shape.

4. The fuel cell according to claim 3, wherein

15 the stacked cell unit side surface is formed in the taper shape such that a cross sectional area of the internal manifold becomes smaller in a fluid flow direction.

5. The fuel cell according to claim 1, further comprising:

an adhesive that bonds the separators; and wherein

20 the adhesive is surface smoothed at the same time as the surface smoothing of the stacked cell unit side surface.

6. A fuel cell comprising:

a stacked cell unit including a plurality of stacked cells having separators;
25 an internal manifold formed so as to pass through the separators, wherein
the stacked cell unit has a stacked cell unit side surface which faces the internal manifold and which is smooth as compared to an other surface of the stacked cell unit.

7. The fuel cell according to claim 6, wherein

30 the stacked cell includes a membrane electrode assembly, and the stacked cell unit side surface is close to the membrane electrode assembly.

8. The fuel cell according to claim 6, wherein

the other surface of the stacked cell unit is an external surface that is parallel to a cell

stacked direction of the stacked cell unit.

9. The fuel cell according to claim 6, wherein
the stacked cell unit side surface is formed in a taper shape.

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10. The fuel cell according to claim 9, wherein
the stacked cell unit side surface is formed in the taper shape such that a cross sectional area of the internal manifold becomes smaller in a fluid flow direction.

10 11. The fuel cell according to claim 6, further comprising:
an adhesive that bonds the separators; and wherein
the adhesive is surface smoothed at the same time as the surface smoothing of the stacked cell unit side surface.

15 12. A fuel cell comprising:
a stacked cell unit including a plurality of stacked cells having separators;
an internal manifold formed so as to pass through the separators; and
a sleeve that is inserted within the internal manifold.

20 13. The fuel cell according to claim 12, wherein
the sleeve is inserted so as to form an internal surface of the internal manifold.

14. A manufacturing method for the fuel cell, comprising:
a first step of stacking and fixing a plurality of cells having separators so as to form a
25 stacked cell unit; and
a second step of executing surface smoothing of a stacked cell unit side surface formed from a side surface of each of the separators of the stacked cell unit.

15. The manufacturing method for the fuel cell according to claim 14, wherein
30 in the second step, a machining tool is placed in contact with the stacked cell unit side surface, and this machining tool is at least one of rotated and reciprocally moved in order to execute the surface smoothing of the stacked cell unit side surface.

16. A manufacturing device for the fuel cell, comprising:

a fixing portion that stacks and fixes a plurality of cells having separators so as to form a stacked cell unit; and

a machining portion that executes surface smoothing of a stacked cell unit side surface formed from a side surface of each of the separators of the stacked cell unit.

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17. The manufacturing device for the fuel cell according to claim 16, wherein

the machining portion places a machining tool in contact with the stacked cell unit side surface, and then at least one of rotates and reciprocally moves this machining tool in order to execute the surface smoothing.

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